

sand, and later transferred to soil. Good roots were secured, and a considerable expansion of the leaves and elongation of the internodes, but I am inclined to doubt whether any new leaves were laid down. One of these rooted spikelets produced three stigmas, "silks," an additional abnormality in the staminate inflorescence.

Such chloranthly or vivipary has sometimes been observed in *Zea Mays*. Perhaps some one finding it again may be so fortunate as to get good vegetative propagations. Possibly the technique adopted in my attempts was not adequate, but a wide series of experiments could not be made.

THE FLORA OF NORTHAMPTON COUNTY, PENNSYLVANIA

BY WILBUR L. KING

(Continued from July TORREYA)

VIOLACEAE

- VIOLA PALMATA* L. In thickets in Monocacy valley 1 mile north of Bethlehem, Apr. 22, 1897.; on dry hillsides of Lehigh Mt. near South Bethlehem, May 30. Altitude 850 feet.
- VIOLA PAPILIONACEA* Pursh. In woodlands. (Porter.)
- VIOLA OBLIQUA* Hill. In woodland along Monocacy Creek 1 mile north of Bethlehem. April 22, 1897.
- VIOLA DOMESTICA* Bickn. In cultivated soil and about dwellings. Bethlehem.
- VIOLA CUCULLATA* Ait. In bogs and meadows. (Porter.)
- VIOLA VILLOSA* Walt. In woods near South Bethlehem. May 30.
- VIOLA SORORIA* Willd. In woodland along Monocacy valley near Bethlehem.
- VIOLA SAGITTATA* Ait. In wet meadows and marshes. (Porter.)
- VIOLA FIMBRIATULA* J. E. Smith. On hillsides of Lehigh Mt. near Lehigh University. Altitude 850 feet.
- VIOLA PEDATA* L. At Bougher Hill, Williams township (J. A. Ruth). In copse on Lehigh Mt. May 9, 1896. Altitude 900 feet.
- VIOLA ODORATA* L. In thickets along Monocacy creek 1 mile north of Bethlehem.
- VIOLA BLANDA* Willd. In damp woods on Lehigh Mt. May 13, 1899.
- VIOLA LANCEOLATA* L. In wet meadows along streams. (Porter.)
- VIOLA PUBESCENS* Ait. In woods on Lehigh Mt. April 27, 1896.
- VIOLA SCABRIUSCULA* (T. & G.) Schwein. In moist woods along Monocacy creek 1½ miles north of Bethlehem.
- VIOLA STRIATA* Ait. In moist thickets along Lehigh canal 1 mile east of Bethlehem. May 9, 1896.
- VIOLA ROSTRATA* Pursh. In rocky woods. (Porter.)
- VIOLA TRICOLOR* L. In waste places, sparingly escaped. (Porter.)
- VIOLA RAFINESQUII* Greene. On hillsides. (Porter.)
- CUBELIUM CONCOLOR* (Forst.) Raf. In moist woods. (Porter.)

THYMELEACEAE

DIRCA PALUSTRIS L. In woods and thickets. (Porter.)

LYTHRACEAE

DECODON VERTICILLATUS (L.) Ell. In swamps. (Porter.)

LYTHRUM SALICARIA L. In moist places along the Delaware River at Portland, July 4, 1912.

PARSONSIA PETIOLATA (L.) Rusby. In sandy soil, and in fields 1 mile east of Bethlehem and in meadow 1 mile north of Bethlehem.

ONAGRACEAE

ISNARDIA PALUSTRIS L. In muddy ditches and swamps. (Porter.)

LUDWIGIA ALTERNIFOLIA L. In moist sandy soil along Lehigh river near Bethlehem. Aug. 5, 1899.

CHAMAENERION ANGUSTIFOLIUM (L.) Scop. In dry soil. (Porter.)

EPILOBIUM COLORATUM Muhl. In meadow land, Bethlehem. Aug. 12, 1899.

ONAGRA BIENNIS (L.) Scop. In dry soil 1 mile east of Bethlehem. July 10, 1899.

KNEIFFIA PUMILA (L.) Spach. In clearing on Lehigh Mt. Altitude 900 feet.

KNEIFFIA FRUTICOSA (L.) Raimann. In dry soil. (Porter.)

KNEIFFIA FRUTICOSA PILOSELLA (Raf.) Britton. On banks. (Porter.)

GAURA BIENNIS L. In dry soil at Island Park. Aug. 25, 1902.

CIRCAEA LUTETIANA L. In moist woods on Lehigh Mt. near Lehigh University. Altitude 850 feet. July 1, 1899.

CIRCAEA ALPINA L. Associated with the preceding species. June 1, 1899.

HALORAGIDACEAE

PROSERPINACA PALUSTRIS L. In swamps. (Porter.)

ARALIACEAE

ARALIA RACEMOSA L. In rich woods. (Porter.)

ARALIA NUDICAULIS L. In woods on Lehigh Mt. May 22, 1898.

PANAX QUINQUEFOLIUM L. In rich woods. (Porter.)

PANAX TRIFOLIUM L. In damp woodland at Nazareth. July 7, 1901.

UMBELLIFERAE

DAUCUS CAROTA L. In fields and waste places; entirely too frequent.

ANGELICA ATROPURPUREA L. In swamps and moist grounds. (Porter.)

ANGELICA VILLOSA (Walt.) B. S. P. In dry soil. (Porter.)

OXYPOLIS RIGIDUS (L.) Britton. In swamps. (Porter.)

HERACLEUM LANATUM Michx. In moist grounds. (Porter.)

PASTINACA SATIVA L. In waste places and along roadsides, Bethlehem, Easton and Portland. Common.

THASPIUM TRIFOLIATUM (L.) Britton. In woods. (Porter.)

THASPIUM TRIFOLIATUM AUREUM (Nutt.) Britton. In woods and shaded situations east of Bethlehem.

THASPIUM BARBINODE (Michx.) Nutt. Along streams. (Porter.)

SANICULA MARYLANDICA L. In woods near South Bethlehem.

SANICULA GREGARIA Bicknell. In woods and thickets. (Porter.)

SANICULA CANADENSIS L. In woodland. (Porter.)

FOENICULUM FOENICULUM (L.) Karst. In waste places. (Porter.)

TAENIDA INTEGERRIMA (L.) Drude. In rocky or sandy soil. (Porter.)

PIMPINELLA SAXIFRAGA L. In waste places, Easton. (Porter.)

ANTHRISCUS CEREFOLIUM (L.) Hoffm. Naturalized from Europe. (Porter.)

CHAEROPHYLLUM PROCUMBENS (L.) Crantz. In moist shady soil along Lehigh canal 1 mile east of Bethlehem. May 12, 1900.

WASHINGTONIA CLAYTONI (Michx.) Britton. In woods and clearings. (Porter.)

- WASHINGTONIA LONGISTYLIS (Torr.) Britton. In shaded, sandy soil, Calypso Island, Bethlehem.
- CONIUM MACULATUM L. In waste places. (Porter.)
- SIUM CIRCUTAEFOLIUM Gmel. In swamps. (Porter.)
- ZIZIA AUREA (L.) Koch. In moist soil along towpath between Bethlehem and Freemansburg. June 3, 1899.
- CICUTA MACULATA L. Along bank of Lehigh river, Bethlehem; also along the Delaware River, Portland.
- CICUTA BULBIFERA L. In wet soil along Lehigh canal near Bethlehem. Sept. 16, 1899.
- DERINGA CANADENSIS (L.) Kuntze. In shaded sandy soil on Calypso Island. Aug. 7, 1899; along Delaware River, Portland.
- AEGOPODIUM PODAGRARIA L. In waste places, Bethlehem. (Porter.)
- HYDROCOTYLE AMERICANA L. In wet places. (Porter.)
- CORIANDRUM SATIVUM L. Adventive. (Porter.)

CORNACEAE

- CORNUS FLORIDA L. In rocky woods along Monocacy valley 1 mile north of Bethlehem. May 17, 1897.
- CORNUS AMONUM Mill. In wet soil. (Porter.)
- CORNUS STOLONIFERA Michx. In moist soil near Island Park. Aug. 25, 1901.
- CORNUS CANDIDISSIMA Marsh. In rich soil along Monocacy creek. June 20, 1901.
- CORNUS ALTERNIFOLIA L. f. In woods near Bethlehem.
- NYSSA SYLVATICA Marsh. In rich soil, Bethlehem.

CLETHRACEAE

- CLETHRA ALNIFOLIA L. In wet soil. (Porter.)

PYROLACEAE

- PYROLA ROTUNDIFOLIA L. In dry woods. (Porter.)
- PYROLA ELLIPTICA Nutt. In woods on Lehigh Mt. Ascends 850 feet. July 1, 1899.
- CHIMAPHILA MACULATA (L.) Pursh. In woods on Lehigh Mt.
- CHIMAPHILA UMBELLATA (L.) Nutt. In rocky woodland on Lehigh Mt. near South Bethlehem. Ascends to 850 feet; also at Nazareth.

MONOTROPACEAE

- MONOTROPA UNIFLORA L. In woods on Lehigh Mt. July, 1896.
- HYPOPITYS HYPOPITYS (L.) Small. In dry woods. (Porter.)

ERICACEAE

- AZALEA NUDIFLORA L. In copses on Lehigh Mt. May 22, 1898.
- AZALEA NUDIFLORA GLANDIFERA Porter. (Porter.)
- AZALEA VISCOSA L. In swamps. (Porter.)
- RHODODENDRON MAXIMUM L. In woods on Lehigh Mt.
- KALMIA ANGUSTIFOLIA L. In moist soil. (Porter.)
- KALMIA LATIFOLIA L. On rocky hillsides, Lehigh Mt. near Lehigh University. Ascends 800 feet. May 30, 1900.
- XOLISMA LIGUSTRINA (L.) Britton. In swamps and wet soil. (Porter.)
- EPIGAEA REPENS L. In woods between Bethlehem and Nazareth. April 25, 1896.
- GAULTHERIA PROCUMBENS L. In woodland near Wind Gap. July 4, 1901.

VACCINIACEAE

- GAYLUSSACIA FRONDOSA (L.) T. & G. In moist woods. (Porter.)
- GAYLUSSACIA RESINOSA (Ait.) T. & G. In woods near South Bethlehem. (J. A. Ruth.)

- VACCINIUM CORYMBOSUM L. In swamps, thickets and low woods. (Porter.)
 In woods near South Bethlehem. (J. A. Ruth.)
 VACCINIUM CANADENSE Richards. In moist places. (Porter.)
 VACCINIUM PENNSYLVANICUM Lam. In dry, rocky or sandy soil. (Porter.)
 VACCINIUM VACILLANS Kalm. In dry soil. (Porter.)
 VACCINIUM STAMINEUM L. In dry woods and thickets. (Porter.)
 OXYCOCCUS MACROCARPUS (Ait.) Pers. In bogs. (Porter.)

PRIMULACEAE

- LYSIMACHIA PUNCTATA L. In waste places. (Porter.)
 LYSIMACHIA QUADRIFOLIA L. In thickets on Lehigh Mt. Altitude 900 feet.
 June 12, 1896.
 LYSIMACHIA TERRESTRIS (L.) B. S. P. In wet grounds along canal, Bethlehem.
 July 20, 1899.
 LYSIMACHIA NUMMULARIA L. In damp or grassy situations, Bethlehem.
 STEIRONEMA CILIATUM (L.) Raf. In moist sandy soil along Lehigh river east
 of Bethlehem. July 15, 1899, also at Portland.
 TRIENTALIS AMERICANA Pursh. In damp woods and thickets. (Porter.)
 ANAGALLIS ARVENSIS L. In meadows along Monocacy creek 1 mile north of
 Bethlehem. July, 1896.

EBENACEAE

- DIOSPYROS VIRGINIANA L. In fields and woods. (Porter.)

OLEACEAE

- SYRINGA VULGARIS L. Escaped from cultivation. (Porter.)
 FRAXINUS AMERICANA L. In moist soil along Monocacy creek near Bethlehem.
 Sept. 3, 1899, in fruit.
 FRAXINUS PENNSYLVANICA Marsh. In moist soil. (Porter.)
 FRAXINUS NIGRA Marsh. In swamps and wet grounds. (Porter.)
 LIGUSTRUM VULGARE L. Escaped from cultivation. (Porter.)

GENTIANACEAE

- ERYTHRAEA CENTAURIUM (L.) Pers. In waste places, Nazareth. (Porter.)
 SABBATIA ANGULARIS (L.) Pursh. In rich soil. (Porter.)
 GENTIANA CRINITA Froel. In moist woods and meadows in Monocacy valley,
 Sept. 28, 1897. (G. W. Caffrey.)
 GENTIANA QUINQUEFOLIA L. In dry rocky soil along L. V. R. R. near South
 Bethlehem. Sept. 28, 1896.
 GENTIANA ANDREWSII Griseb. In moist soil. (Porter.)
 OBOLARIA VIRGINICA L. In woods between Bethlehem and Nazareth; also
 on Lehigh Mt. May, 1899.
 BARTONIA IODANDRA Robinson. Specimens doubtfully referred here have
 been found in Northampton county. (Porter.)

APOCYNACEAE

- APOCYNUM ANDROSAEMIFOLIUM L. In fields and thickets, Bethlehem. July 1'
 1900.
 APOCYNUM CANNABINUM L. In fields and thickets. (Porter.)
 APOCYNUM ALBUM Greene. On river shores. (Porter.)

ASCLEPIADACEAE

- ASCLEPIAS TUBEROSA L. In dry stony thickets, 1 mile east of Bethlehem.
 ASCLEPIAS DECUMBENS L. In dry fields. (Porter.)
 ASCLEPIAS INCARNATA L. In meadows along Monocacy creek and along bank
 of Lehigh river near Bethlehem. July 15, 1899.
 ASCLEPIAS PULCHRA Ehrh. In moist fields and swamps. (Porter.)

- ASCLEPIAS VARIEGATA L. In dry woods or thickets. (Porter.)
 ASCLEPIAS QUADRIFOLIA Jacq. In copse on Lehigh Mt. May 30, 1896.
 Altitude 900 feet.
 ASCLEPIAS SYRIACA L. Common in uncultivated fields and along roadsides,
 Bethlehem.
 ASCLEPIAS VERTICILLATA L. Dry hills and fields. (Porter.)
 ACERATES VIRIDIFLORA (Raf.) Eaton. In dry, sandy or rocky soil. (Porter.)

CONVOLVULACEAE

- QUAMOCLIT COCCINEA (L.) Moench. Along river banks in waste places.
 (Porter.)
 IPOMOEA PANDURATA (L.) Meyer. In dry soil. Bethlehem.
 IPOMOEA PURPUREA (L.) Roth. In waste places, Bethlehem.
 IPOMOEA HEDERACEA Jacq. In waste places, Bethlehem.
 CONVULVULUS SEPIUM L. In waste places and hedges, Bethlehem. Sept. 7,
 1899, also at Portland.
 CONVULVULUS JAPONICUS Thunb. Escaped from cultivation. (Porter.)
 CONVULVULUS SPITHAMAEUS L. In clearing on Lehigh Mt. June 1, 1903,
 ascending 900 feet. (G. W. Caffrey.)
 CONVULVULUS ARVENSIS L. On ore dumps in Bethlehem Steel Co.'s yards.
 Reported in Bull. Torrey Club 19: 10. 1892.

CUSCUTACEAE

- CUSCUTA EPITHYMUM Murr. Usually on clover. (Porter.)
 CUSCUTA CEPHALANTHI Engelm. On shrubs and tall herbs. (Porter.)
 CUSCUTA GRONOVII Willd. Common on herbs in moist places along Lehigh
 canal, Bethlehem.

HYDROPHYLLACEAE

- HYDROPHYLLUM VIRGINICUM L. In thickets along Saucon creek 2 miles from
 its mouth.

BORAGINACEAE

- HELIOTROPIUM EUROPAEUM L. On ore dumps in Bethlehem Steel Co.'s yards.
 Reported in Bull. Torrey Club 19: 10. 1892.
 CYNOGLOSSUM OFFICINALE L. On dry hillsides, Lehigh Mt. Altitude 850
 feet. May 30, 1896.
 LAPPULA VIRGINIANA (L.) Greene. In dry soil, Bethlehem. July 15, 1899.
 MERTENSIA VIRGINICA (L.) DC. In low meadows and along streams. (Por-
 ter.)
 MYOSOTIS LAXA Lehm. Along mountain streams, Lehigh Mt. near South
 Bethlehem. May 30, 1898.
 MYOSOTIS ARVENSIS (L.) Lam. In fields. (Porter.)
 MYOSOTIS VIRGINICA (L.) B. S. P. On dry hills and banks. (Porter.)
 LITHOSPERMUM ARVENSE L. On dry hillsides, Lehigh Mt. May 12, 1900.
 LITHOSPERMUM CANESCENS (Michx.) Lehm. In dry soil. (Porter.)
 SYMPHYTUM OFFICINALE L. In waste places. (Porter.)
 ECHIUUM VULGARE L. In ballast on C. R. R. of N. J. tracks and in dry soil
 along Lehigh canal, Bethlehem.

VERBENACEAE

- VERBENA URTICIFOLIA L. In waste places, Bethlehem.
 VERBENA HASTATA L. In moist grounds along Monocacy creek, Bethlehem.
 VERBENA ANGUSTIFOLIA Michx. In dry fields. (Porter.)

LABIATAE

- TEUCRIUM CANADENSE L. In moist soil, Bethlehem. July 22, 1899.
 ISANTHUS BRACHIATUS (L.) B. S. P. In ballast along C. R. R. track 1 mile
 east of Bethlehem. Sept. 4, 1899.

- TRICHOSTEMA DICHOTOMUM L. In ballast along C. R. R. of N. J. tracks near Glendon. Aug. 25, 1902.
- SCUTELLARIA LATERIFLORA L. In meadows in Monocacy valley; along mountain stream on Lehigh Mt. Aug. 12, 1899, altitude 850 feet; along bank of Lehigh river at Island Park.
- SCUTELLARIA PILOSA Michx. In woods on Lehigh Mt. July 1, 1899.
- SCUTELLARIA PARVULA Michx. In moist sandy soil. (Porter.)
- SCUTELLARIA GALERICULATA L. In swamps and along streams. (Porter.)
- MARRUBIUM VULGARE L. In waste places. (Porter.)
- AGASTACHE NEPETOIDES L. In thickets along Monocacy creek. Aug. 12.
- AGASTACHE SCROPULARIAEFOLIA (Willd.) Kuntze. In woods and thickets. (Porter.)
- NEPETA CATARIA L. In waste places, Bethlehem.
- GLECOMA HEDERACEA L. In waste places, Bethlehem. May 8, 1899.
- PRUNELLA VULGARIS L. In fields, waste places and along roadsides, Bethlehem.
- LEONURUS CARDIACA L. In waste places along Delaware river several miles below Easton. June 11.
- LAMIUM AMPLEXICAULE L. In fields and thickets near Bethlehem. May 7, 1899.
- LAMIUM MACULATUM L. Along roadsides. Escaped from cultivation. Bethlehem. June 3, 1901.
- STACHYS PALUSTRIS L. In moist soil. (Porter.)
- SALVIA LYRATA L. In dry, mostly sandy soil and thickets. (Porter.)
- MONARDA DIDYMA L. In moist soil, along Delaware river above Easton. (Porter.)
- MONARDA CLINOPODIA L. In woods and thickets. (Porter.)
- MONARDA FISTULOSA L. On dry hills and in thickets. (Porter.)
- MONARDA MEDIA Willd. In moist thickets above Easton. (Porter.)
- MONARDA MOLLIS L. In dry soil. (Porter.)
- BLEPHILIA CILIATA (L.) Raf. In dry woods and thickets. (Porter.)
- HEDEOMA PULEGIOIDES (L.) Pers. In dry soil on Lehigh Mt. near Lehigh University, altitude 800 feet; also along Monocacy creek, July 20.
- MELISSA OFFICINALIS L. In waste places, thickets and woods. (Porter.)
- CLINPODIUM VULGARE L. In fields 1 mile north of Bethlehem. July 10, 1899.
- ORIGANUM VULGARE L. In fields and waste places. (Porter.)
- KOELLIA FLEXUOSA (Walt.) MacM. In fields and thickets. (Porter.)
- KOELLIA VIRGINIANA (L.) MacM. In fields along Monocacy creek near Bethlehem. Aug. 12.
- KOELLIA VERTICILLATA (Michx.) Kuntze. In dry fields and thickets. (Porter.)
- KOELLIA CLINPODIOIDES (T. & G.) Kuntze. In dry soil. (Porter.)
- KOELLIA INCANA (L.) Kuntze. Dry hillsides and thickets. (Porter.)
- KOELLIA MUTICA (Michx.) Britton. In sandy soil at Island Park. Aug. 25, 1902.
- CUNILA ORIGANOIDES (L.) Britton. In dry woods, Lehigh Mt. (J. A. Ruth.)
- LYCOPUS VIRGINICUS L. In moist soil on bank of Lehigh river at Bethlehem.
- LYCOPUS COMMUNIS Bicknell. In moist soil. (Porter.)
- LYCOPUS AMERICANUS Muhl. In moist soil along Lehigh river, Bethlehem. July 15, 1899.
- MENTHA SPICATA L. In wet soil and in waste places, Bethlehem. July 22, 1899.
- MENTHA PIPERITA L. In meadows along Saucon creek and along Monocacy creek.
- MENTHA LONGIFOLIA (L.) Huds. In waste places. (Porter.)
- MENTHA ROTUNDIFOLIA (L.) Huds. In waste places, Bethlehem.
- MENTHA CRISPA L. In swamps and roadside ditches. (Porter.)
- MENTHA ARVENSIS L. In dry waste places. (Porter.)
- MENTHA GENTILIS L. In waste places and along streams. (Porter.)
- MENTHA SATIVA L. In waste places, Bethlehem. July 22, 1899; also at Easton.

- MENTHA CANADENSIS L. In moist sandy soil along Lehigh river, Bethlehem. Aug. 5, 1899. Along Delaware river above Easton.
 COLLINSONIA CANADENSIS L. In woods on Lehigh Mt. July 22, 1899.
 PERILLA FRUTESCENS (L.) Britton. In waste places as an escape at Easton. (Porter.)

SOLANACEAE

- PHYSALODES PHYSALODES (L.) Britton. In waste places, escaped. (Porter.)
 PHYSALIS PHILADELPHICA Lam. In waste places, Bethlehem.
 PHYSALIS VIRGINIANA Mill. In rich soil and open places. (Porter.)
 PHYSALIS VIRGINIANA INTERMEDIA Rydberg. (Porter.)
 PHYSALIS HETEROPHYLLA Nees. In rich soil, Bethlehem.
 SOLANUM NIGRUM L. On ore dumps in Bethlehem Steel Co.'s yards. Reported in Bull. Torrey Club 19: 10. 1892.
 SOLANUM CAROLINENSE L. In sandy soil along Lehigh river at Bethlehem. Aug. 5, 1899.
 SOLANUM DULCAMARA L. In moist soil along Monocacy creek, Bethlehem. July 6, 1898, also at Portland.
 LYCOPERSICON LYCOPERSICON (L.) Karst. In waste places, escaped, Bethlehem.
 DATURA STRAMONIUM L. In fields and waste places, Bethlehem. Sept. 28, 1896.
 DATURA TATULA L. In fields and waste places, Bethlehem.
 NICOTIANA RUSTICA L. In fields and waste places. (Porter.)
 NICOTIANA LONGIFLORA Cav. Escaped from gardens, Easton. (Britton & Brown Vol. 3, p. 141.)
 PETUNIA AXILLARIS (Lam.) B. S. P. In waste places. (Porter.)
 PETUNIA VIOLACEA Lindl. In waste places, escaped. (Porter.)

(To be concluded.)

SHORTER NOTES

ON THE IDENTITY OF *Dolichos unguiculatus* LINNAEUS.—In the first edition of the Species Plantarum Linnaeus described a plant from Barbados as *Dolichos unguiculatus*, the binomial being based on an earlier description in the Hortus Upsalensis, 1748, p. 214. The original description in the latter work is as follows:

“DOLICHOS leguminibus subcylindraceutis capitatis: acumine recurvo concavo.

Phaseolus barbadensis, siliqua tenui recta, semine ex purpureo nigricante.

Habitat in Barbados.

Hospitatur in Caldario, annua.

Obs. Flos purpureus est.”

It appears from this description that the plant was grown in the hothouse at Upsala, the seed having been obtained from Barbados.

In 1770, Jacquin (Hort. Vind., 1, pl. 23) published a colored